

## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
 US Department of Commerce  
 United States Patent and Trademark  
 Office, PCT  
 2011 South Clark Place Room  
 CP2/5C24  
 Arlington, VA 22202  
 ETATS-UNIS D'AMERIQUE  
 in its capacity as elected Office

|   |   |
|---|---|
| Date of mailing (day/month/year)<br>12 February 2001 (12.02.01)       |   |
| International application No.<br>PCT/IB00/00841                       | Applicant's or agent's file reference<br>P/61813/GPTX     |
| International filing date (day/month/year)<br>08 June 2000 (08.06.00) | Priority date (day/month/year)<br>08 June 1999 (08.06.99) |
| Applicant<br>MOLINARI, Mario  |   |

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:  
 08 January 2001 (08.01.01)

☐ in a notice effecting later election filed with the International Bureau on:  
 \_\_\_\_\_

2. The election ☒ was  
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO  
 34, chemin des Colombettes  
 1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Olivia TEFY

Telephone No.: (41-22) 338.83.38

## PATENT COOPERATION TREATY

PCT

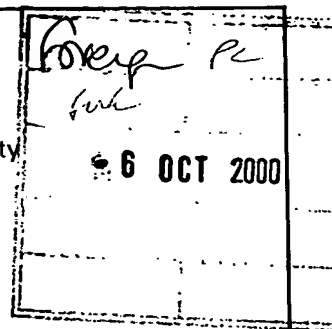
NOTIFICATION CONCERNING  
SUBMISSION OR TRANSMITTAL  
OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

From the INTERNATIONAL BUREAU

To:

HOSTE, Colin, Francis  
Marconi Intellectual Property  
Waterhouse Lane  
Chelmsford  
Essex CM1 2QX  
ROYAUME-UNI



|   |   |
|---|---|
| Date of mailing (day/month/year)<br>25 September 2000 (25.09.00)                |   |
| Applicant's or agent's file reference<br>P/61813/GPTX - <i>File PCT CUPPIS.</i> | IMPORTANT NOTIFICATION  |
| International application No.<br>PCT/IB00/00841                                 | International filing date (day/month/year)<br>08 June 2000 (08.06.00) |
| International publication date (day/month/year)<br>Not yet published            | Priority date (day/month/year)<br>08 June 1999 (08.06.99)             |
| Applicant<br>MARCONI COMMUNICATIONS SPA et al                                   |   |

1. The applicant is hereby notified of the date of receipt (except where the letters "NR" appear in the right-hand column) by the International Bureau of the priority document(s) relating to the earlier application(s) indicated below. Unless otherwise indicated by an asterisk appearing next to a date of receipt, or by the letters "NR", in the right-hand column, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
2. This updates and replaces any previously issued notification concerning submission or transmittal of priority documents.
3. An asterisk(\*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b). In such a case, **the attention of the applicant is directed** to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
4. The letters "NR" appearing in the right-hand column denote a priority document which was not received by the International Bureau or which the applicant did not request the receiving Office to prepare and transmit to the International Bureau, as provided by Rule 17.1(a) or (b), respectively. In such a case, **the attention of the applicant is directed** to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

| <u>Priority date</u>    | <u>Priority application No.</u> | <u>Country or regional Office<br/>or PCT receiving Office</u> | <u>Date of receipt<br/>of priority document</u> |
|-------------------------|---------------------------------|---|---|
| 08 June 1999 (08.06.99) | 9913239.1                       | GB  | 17 July 2000 (17.07.00)                         |

|   |   |
|---|---|
| <p>The International Bureau of WIPO<br/>34, chemin des Colombettes<br/>1211 Geneva 20, Switzerland</p> <p>Facsimile No. (41-22) 740.14.35</p> | <p>Authorized officer</p> <p>Marc Salzman </p> <p>Telephone No. (41-22) 338.83.38</p> |
|---|---|

# PATENT COOPERATION TREATY

PCT

## NOTICE INFORMING THE APPLICANT OF THE COMMUNICATION OF THE INTERNATIONAL APPLICATION TO THE DESIGNATED OFFICES

(PCT Rule 47.1(c), first sentence)

From the INTERNATIONAL BUREAU

To:

HOSTE, Colin, Francis  
Marconi Intellectual Property  
Waterhouse Lane  
Chelmsford  
Essex CM1 2QX  
ROYAUME-UNI

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| APC   | DEC 2000 |
| File  |          |

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|---|---|---|--|
| Date of mailing (day/month/year)<br>14 December 2000 (14.12.00) |   | IMPORTANT NOTICE  |  |
| Applicant's or agent's file reference<br>P/61813/GPTX           |   |   |  |
| International application No.<br>PCT/IB00/00841                 | International filing date (day/month/year)<br>08 June 2000 (08.06.00) | Priority date (day/month/year)<br>08 June 1999 (08.06.99) |  |
| Applicant<br>MARCONI COMMUNICATIONS SPA et al                   |   |   |  |

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this Notice:  
AU,KP,KR,US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:  
AE,AL,AM,AP,AT,AZ,BA,BB,BG,BR,BY,CA,CH,CN,CR,CU,CZ,DE,DK,DM,EA,EE,EP,ES,FI,GB,GD,GE,GH,GM,HR,HU,ID,IL,IN,IS,JP,KE,KG,KZ,LC,LK,LR,LS,LT,LU,LV,MA,MD,MG,MK,MN,MW,MX,NO,NZ,OA,PL,PT,RO,RU,SD,SE,SG,SI,SK,SL,TJ,TM,TR,TT,TZ,UA,UG,UZ,VN,YU,ZA,ZW  
The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).
3. Enclosed with this Notice is a copy of the international application as published by the International Bureau on 14 December 2000 (14.12.00) under No. WO 00/76121

### REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a demand for international preliminary examination must be filed with the competent International Preliminary Examining Authority before the expiration of 19 months from the priority date.

It is the applicant's sole responsibility to monitor the 19-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

### REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))

If the applicant wishes to proceed with the international application in the national phase, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

|  |   |
|--|---|
| The International Bureau of WIPO<br>34, chemin des Colombettes<br>1211 Geneva 20, Switzerland<br>Facsimile No. (41-22) 740.14.35 | Authorized officer<br>J. Zahra<br>Telephone No. (41-22) 338.83.38 |
|--|---|

## PATENT COOPERATION TREATY

PCT

From the INTERNATIONAL BUREAU

To:

HOSTE, Colin, Francis  
Marconi Intellectual Property  
Waterhouse Lane  
Chelmsford  
Essex CM1 2QX  
ROYAUME-UNI

INFORMATION CONCERNING ELECTED  
OFFICES NOTIFIED OF THEIR ELECTION

(PCT Rule 61.3)

|   |   |   |  |
|---|---|---|--|
| Date of mailing (day/month/year)<br>12 February 2001 (12.02.01) |   | IMPORTANT INFORMATION                                     |  |
| Applicant's or agent's file reference<br>P/61813/GPTX           |   |   |  |
| International application No.<br>PCT/IB00/00841                 | International filing date (day/month/year)<br>08 June 2000 (08.06.00) | Priority date (day/month/year)<br>08 June 1999 (08.06.99) |  |
| Applicant<br>MARCONI COMMUNICATIONS SPA et al                   |   |   |  |

1. The applicant is hereby informed that the International Bureau has, according to Article 31(7), notified each of the following Offices of its election:

AP : GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW  
EP : AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE  
National : AU, BG, CA, CN, CZ, DE, IL, JP, KP, KR, MN, NO, NZ, PL, RO, RU, SE, SK, US

2. The following Offices have waived the requirement for the notification of their election; the notification will be sent to them by the International Bureau only upon their request:

EA : AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
OA : BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
National : AE, AL, AM, AT, AZ, BA, BB, BR, BY, CH, CR, CU, DK, DM, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IN, IS, KE, KG, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MW, MX, PT, SD,  
SG, SI, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW

3. The applicant is reminded that he must enter the "national phase" before the expiration of 30 months from the priority date before each of the Offices listed above. This must be done by paying the national fee(s) and furnishing, if prescribed, a translation of the international application (Article 39(1)(a)), as well as, where applicable, by furnishing a translation of any annexes of the international preliminary examination report (Article 36(3)(b) and Rule 74.1).

Some offices have fixed time limits expiring later than the above-mentioned time limit. For detailed information about the applicable time limits and the acts to be performed upon entry into the national phase before a particular Office, see Volume II of the PCT Applicant's Guide.

The entry into the European regional phase is postponed until 31 months from the priority date for all States designated for the purposes of obtaining a European patent.

|   |                                    |
|---|------------------------------------|
| The International Bureau of WIPO<br>34, chemin des Colombettes<br>1211 Geneva 20, Switzerland | Authorized officer:<br>Olivia TEFY |
| Facsimile No. (41-22) 740.14.35   | Telephone No. (41-22) 338.83.38    |

## PATENT COOPERATION TREATY

PCT

NOTIFICATION OF RECEIPT OF  
RECORD COPY

(PCT Rule 24.2(a))

From the INTERNATIONAL BUREAU

To:

HOSTE, Colin, Francis  
Marconi Intellectual Property  
Waterhouse Lane  
Chelmsford  
Essex CM1 2QX  
ROYAUME-UNI

|      |          |
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| KM   | KU       |
| Fore | PC       |
| APZ  | JUL 2000 |
| File |          |
|      |          |

|   |   |
|---|---|
| Date of mailing (day/month/year)<br>11 July 2000 (11.07.00) | IMPORTANT NOTIFICATION                          |
| Applicant's or agent's file reference<br>P/61813/GPTX       | International application No.<br>PCT/IB00/00841 |

The applicant is hereby notified that the International Bureau has received the record copy of the international application as detailed below.

Name(s) of the applicant(s) and State(s) for which they are applicants:

MARCONI COMMUNICATIONS SPA (for all designated States except US)  
MOLINARI, Mario (for US)

International filing date : 08 June 2000 (08.06.00)  
Priority date(s) claimed : 08 June 1999 (08.06.99)  
Date of receipt of the record copy by the International Bureau : 23 June 2000 (29.06.00)  
List of designated Offices :

AP : GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW  
EA : AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
EP : AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE  
OA : BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
National : AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW

## ATTENTION

The applicant should carefully check the data appearing in this Notification. In case of any discrepancy between these data and the indications in the international application, the applicant should immediately inform the International Bureau.

In addition, the applicant's attention is drawn to the information contained in the Annex, relating to:

- ☒ time limits for entry into the national phase  
☒ confirmation of precautionary designations  
☒ requirements regarding priority documents

A copy of this Notification is being sent to the receiving Office and to the International Searching Authority.

|   |   |
|---|---|
| The International Bureau of WIPO<br>34, chemin des Colombettes<br>1211 Geneva 20, Switzerland | Authorized officer:<br>Maria Victoria CORTIELLO |
| Facsimile No. (41-22) 740.14.35   | Telephone No. (41-22) 338.83.38                 |

**INFORMATION ON TIME LIMITS FOR ENTERING THE NATIONAL PHASE**

The applicant is reminded that the "national phase" must be entered before each of the designated Offices indicated in the Notification of Receipt of Record Copy (Form PCT/IB/301) by paying national fees and furnishing translations, as prescribed by the applicable national laws.

The time limit for performing these procedural acts is **20 MONTHS** from the priority date or, for those designated States which the applicant elects in a demand for international preliminary examination or in a later election, **30 MONTHS** from the priority date, provided that the election is made before the expiration of 19 months from the priority date. Some designated (or elected) Offices have fixed time limits which expire even later than 20 or 30 months from the priority date. In other Offices an extension of time or grace period, in some cases upon payment of an additional fee, is available.

In addition to these procedural acts, the applicant may also have to comply with other special requirements applicable in certain Offices. It is the **applicant's responsibility** to ensure that the necessary steps to enter the national phase are taken in a timely fashion. Most designated Offices do not issue reminders to applicants in connection with the entry into the national phase.

For detailed information about the procedural acts to be performed to enter the national phase before each designated Office, the applicable time limits and possible extensions of time or grace periods, and any other requirements, see the relevant Chapters of Volume II of the PCT Applicant's Guide. Information about the requirements for filing a demand for international preliminary examination is set out in Chapter IX of Volume I of the PCT Applicant's Guide.

GR and ES became bound by PCT Chapter II on 7 September 1996 and 6 September 1997, respectively, and may, therefore, be elected in a demand or a later election filed on or after 7 September 1996 and 6 September 1997, respectively, regardless of the filing date of the international application. (See second paragraph above.)

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

**CONFIRMATION OF PRECAUTIONARY DESIGNATIONS**

This notification lists only specific designations made under Rule 4.9(a) in the request. It is important to check that these designations are correct. Errors in designations can be corrected where precautionary designations have been made under Rule 4.9(b). The applicant is hereby reminded that any precautionary designations may be confirmed according to Rule 4.9(c) before the expiration of 15 months from the priority date. If it is not confirmed, it will automatically be regarded as withdrawn by the applicant. There will be no reminder and no invitation. Confirmation of a designation consists of the filing of a notice specifying the designated State concerned (with an indication of the kind of protection or treatment desired) and the payment of the designation and confirmation fees. Confirmation must reach the receiving Office within the 15-month time limit.

**REQUIREMENTS REGARDING PRIORITY DOCUMENTS**

For applicants who have not yet complied with the requirements regarding priority documents, the following is recalled.

Where the priority of an earlier national, regional or international application is claimed, the applicant must submit a copy of the said earlier application, certified by the authority with which it was filed ("the priority document") to the receiving Office (which will transmit it to the International Bureau) or directly to the International Bureau, before the expiration of 16 months from the priority date, provided that any such priority document may still be submitted to the International Bureau before that date of international publication of the international application, in which case that document will be considered to have been received by the International Bureau on the last day of the 16-month time limit (Rule 17.1(a)).

Where the priority document is issued by the receiving Office, the applicant may, instead of submitting the priority document, request the receiving Office to prepare and transmit the priority document to the International Bureau. Such request must be made before the expiration of the 16-month time limit and may be subjected by the receiving Office to the payment of a fee (Rule 17.1(b)).

If the priority document concerned is not submitted to the International Bureau or if the request to the receiving Office to prepare and transmit the priority document has not been made (and the corresponding fee, if any, paid) within the applicable time limit indicated under the preceding paragraphs, any designated State may disregard the priority claim, provided that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity to furnish the priority document within a time limit which is reasonable under the circumstances.

Where several priorities are claimed, the priority date to be considered for the purposes of computing the 16-month time limit is the filing date of the earliest application whose priority is claimed.

# PATENT COOPERATION TREATY

From the:  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

HOSTE, Colin Francis  
MARCONI Int. Property  
Waterhouse Lane  
Chelmsford  
Essex CM1 2QX  
GRANDE BRETAGNE

|             |     |
|-------------|-----|
| RM          | APC |
| 17 APR 2001 |     |

PCT

WRITTEN OPINION

(PCT Rule 66)

Date of mailing  
(day/month/year) 11.04.2001

Applicant's or agent's file reference

P/61813/GPTX

REPLY DUE

within 3 month(s)  
from the above date of mailing

International application No.

PCT/IB00/00841

International filing date (day/month/year)

08/06/2000

Priority date (day/month/year)

08/06/1999

International Patent Classification (IPC) or both national classification and IPC

H04L12/56

Applicant

MARCONI COMMUNICATIONS SPA

1. This written opinion is the first drawn up by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain document cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

**When?** See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

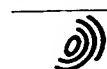
**How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also:** For an additional opportunity to submit amendments, see Rule 66.4.  
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.  
For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 08/10/2001.

Name and mailing address of the international preliminary examining authority:



European Patent Office  
D-80298 Munich  
Tel. +49 89 2399 - 0 Tx: 523656 epmu d  
Fax: +49 89 2399 - 4465

Authorized officer / Examiner

Kopp, K

Formalities officer (incl. extension of time limits)

Barrio Baranano, A  
Telephone No. +49 89 2399 8621



**I. Basis of the opinion**

1. With regard to the **elements** of the international application (Replacement *sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed"*):

**Description, pages:**

1-23 as originally filed

**Claims, No.:**

1-27 as originally filed

**Drawings, sheets:**

1/12-12/12 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been and will not be examined in respect of:

- ☐ the entire international application,  
☒ claims Nos. 27,

because:

- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):
- ☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 27 are so unclear that no meaningful opinion could be formed (*specify*):  
**see separate sheet**
- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☐ no international search report has been established for the said claims Nos. .

2. A written opinion cannot be drawn due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

- ☐ the written form has not been furnished or does not comply with the standard.  
☐ the computer readable form has not been furnished or does not comply with the standard.

**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

|                     |        |                      |
|---------------------|--------|----------------------|
| Novelty (N)         | Claims | 1, 11-14, 16, 18, 25 |
| Inventive step (IS) | Claims | 1-26                 |

## WRITTEN OPINION

International application No. PCT/IB00/00841

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Industrial applicability (IA)      Claims

2. Citations and explanations  
see separate sheet

### VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:  
see separate sheet

### VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
see separate sheet

**Cited Documents**

The following documents are cited in the search report; the numbering will adhere to in the rest of the procedure:

- D1: US-A-5 491 692 (GUNNER CHRISTOPHER W ET AL) 13 February 1996 (1996-02-13)
- D2: AMBROSOLI L, BURGER L, HUTERER M: 'TMN architecture for SDH networks using IS-IS routing protocol: design and performances' PROCEEDINGS OF INTERNATIONAL CONFERENCE ON COMMUNICATION TECHNOLOGY, vol. 1, 5 - 7 May 1996, pages 223-227, XP002159253 Beijing, China
- D3: EP-A-0 895 380 (PLESSEY TELECOMM) 3 February 1999 (1999-02-03)
- D4: KATZ H ET AL: 'SDH MANAGEMENT NETWORK: ARCHITECTURE, ROUTING AND ADDRESSING' PROCEEDINGS OF THE GLOBAL TELECOMMUNICATIONS CONFERENCE (GLOBECOM), US, NEW YORK, IEEE, vol. -, 29 November 1993 (1993-11-29), pages 223-228, XP000428058
- D5: ZHANG Y ET AL: 'AN APPROACH FOR CLUSTER-BASED MULTICAST ROUTING IN LARGE-SCALE NETWORKS' IEICE TRANSACTIONS ON COMMUNICATIONS, JP, INSTITUTE OF ELECTRONICS INFORMATION AND COMM. ENG. TOKYO, vol. E81-B, no. 5, 1 May 1998 (1998-05-01), pages 1029-1040, XP000779509 ISSN: 0916-8516

**Re Item III**

**Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

1. Claim 27 contains references to the drawings. According to Rule 6.2(a) PCT, claims should not contain such references except where absolutely necessary, which is not the case here. Moreover such claims are too unclear for a meaningful opinion to be provided (Article 6 PCT).

*delete  
27.*

**Re Item V**

**Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. With respect to the independent claim 1, see D1, which discloses a communications arrangement forming part of a communications system (column 1, lines 3-4), the arrangement comprising one or more Local Area Networks (figure 1), one or more gateway network elements connected to each LAN (figure 1) and one or more further network elements (figure 1) which, together with the one or more gateway elements, form at least a part of a routing area (column 3, lines 4-11), the one or more gateway elements acting as an interface between the one or more further elements and the one or more LANs (column 3, lines 20-25, figure 1), wherein the one or more further elements are intermediate systems (column 1, lines 32-36), but the one or more gateway elements and the one or more further elements are configured such as to make the one or more further elements appear as end systems as far as the rest of the communications system is concerned (column 4, lines 30-37).

Hence all features of claim 1 are known in combination from D1. Therefore the subject-matter of claim 1 lacks novelty (Articles 33 (1) and (2) PCT).

2. In case of novelty arguable based on minor differences, the subject-matter of claim 1 lacks an inventive step (Articles 33 (1) and (3) PCT).
3. The additional features of the following claims add no novel subject-matter to claim 1, being disclosed in D1:

- |           |   |
|-----------|---|
| Claim 11: | the routing information has been manually entered, see e.g. D1, column 4, lines 54-56   |
| Claim 12: | the packet is forwarded onto the other circuit on which the packet was received, see e.g. D1, column 2, lines 3-6   |
| Claim 13: | not discarding a message packet by a Level 1 intermediate system handling that packet if that intermediate system has access to an attached Level 2 intermediate system forming |

- part of the area or part-area, see e.g. column 9, lines 15-30
- Claim 14: see remark for claim 13
- Claim 16: the communication arrangement defined in this claim could also be derived from D1, figure 1
- Claim 18: the communications arrangement disclosed in this claim could e.g. be derivated from D1, figure 1
- Claim 25: see remark for claim 13

Therefore the subject-matter of claims 11-14, 16, 18 and 25 lacks novelty (Article 33(2) PCT).

4. The additional features of claims 2-10, 15, 17, 19-24 and 26 add nothing of invention significance (Article 33(3) PCT) to claim 1, being either obviously derivable from one of the prior art documents D1 - D5, or minor details obvious to a person skilled in the art based on common general knowledge:

Claim 2-10: the subject-matter of the dependent claims 2-8 do not contain any feature which goes beyond the scope of IS/I.C. Recommendation 10589 and the ITU-T Recommendation G.784.

Claim 15: one or more further elements comprise a peripheral domain, see e.g. D2, figure 2

Claim 17: the communications arrangement disclosed in this claim could derivate e.g. from D2, figure 2

Claim 19: discarding IS-IS Hello protocol data unit and Sequence number Protocol data unit packets received from a node of the second set, see e.g. D4, page 226, left-hand column

Claim 20-24, 26: The additional features of claims 20-24 and 26 are disclosed in D2-D4.

#### **Re Item VII**

#### **Certain defects in the international application**

1. In order to comply with the requirements of Rule 6.3(b) PCT, the independent

claim 1 should be properly cast in the two-part form using the wording "characterized by" or "characterized in that", with those features forming part of the prior art being placed in the preamble. If, however, the applicant is of the opinion that the two-part form would be inappropriate, then reasons therefor should be provided in the letter of reply (see the PCT Guidelines, III-2.3a).

2. The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).
3. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the document D1 is not mentioned in the description, nor is this document identified therein.
4. The phrase "it is possible to incorporate the principles embodied in the co-pending UK patent" on page 16, lines 19-20 should be deleted as the application should be self-contained; such referenced documents are not regarded as part of the disclosure unless they contain matter essential to the invention, in which case the subject-matter in question would have to be incorporated into the description. This however is not the case here (see PCT Gazette-Section IV, C II-4.17).
5. The description should be adapted to any new claims (Rule 5.1(a)(iii) PCT).
6. In order to facilitate the examination of the conformity of the amended application with the requirements of Article 19(2) PCT, the Applicant is requested to clearly identify the amendments carried out, irrespective of whether they concern amendments by addition, replacement or deletion, and to indicate the passages of the application as filed on which these amendments are based.

**Re Item VIII**

**Certain observations on the international application**

1. It is clear from the description on pages 1-4 that the following feature is

essential to the definition of the invention:

(1) the gateway network element is a level 1 / level 2 intermediate station

Since independent claim 1 does not contain this feature it does not meet the requirement following from Article 6 PCT taken in combination with Rule 6.3(b) PCT that any independent claim must contain all the technical features essential to the definition of the invention.

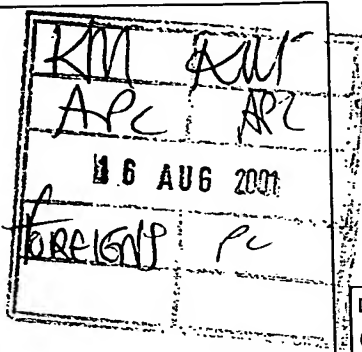
2. Claim 1 does not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined. The claim attempts to define the subject-matter in terms of the **result to be achieved** ("...are configured such as to make..., page 24, line 8) which merely amounts to a statement of the underlying problem. The technical features necessary for achieving this result should be added.

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

HOSTE, Colin Francis  
MARCONI Int. Property  
Waterhouse Lane  
Chelmsford  
Essex CM1 2QX  
GRANDE BRETAGNE



## PCT

### NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing  
(day/month/year) 14.08.2001

Applicant's or agent's file reference  
P/61813/GPTX

#### IMPORTANT NOTIFICATION

International application No.  
PCT/IB00/00841

International filing date (day/month/year)  
08/06/2000

Priority date (day/month/year)  
08/06/1999

Applicant  
MARCONI COMMUNICATIONS SPA

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

#### 4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/

 European Patent Office  
D-80298 Munich  
Tel. +49 89 2399 - 0 Tx: 523656 epmu d  
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Authorized officer

Ahrens, R


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## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

|  |  |   |  |
|--|--|---|--|
| Applicant's or agent's file reference<br>P/61813/GPTX  |  | <b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) |  |
| International application No.<br>PCT/IB00/00841  | International filing date (day/month/year)<br>08/06/2000 | Priority date (day/month/year)<br>08/06/1999  |  |
| International Patent Classification (IPC) or national classification and IPC<br>H04L12/56  |  |   |  |
| Applicant<br>MARCONI COMMUNICATIONS SPA  |  |   |  |
| <p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 8 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>  |  |   |  |
| <p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input checked="" type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input checked="" type="checkbox"/> Certain defects in the international application</p> <p>VIII <input checked="" type="checkbox"/> Certain observations on the international application</p> |  |   |  |
| Date of submission of the demand<br><br>08/01/2001   |  | Date of completion of this report<br><br>14.08.2001   |  |
| Name and mailing address of the international preliminary examining authority:<br> European Patent Office<br>D-80298 Munich<br>Tel. +49 89 2399 - 0 Tx: 523656 epmu d<br>Fax: +49 89 2399 - 4465  |  | Authorized officer<br><br>Kopp, K<br><br>Telephone No. +49 89 2399 7833   |  |



# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/IB00/00841

## I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):
- Description, pages:**

1-23 as originally filed

### Claims, No.:

1-27 as originally filed

### Drawings, sheets:

1/12-12/12 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/IB00/00841

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.

☒ claims Nos. 27.

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 27 are so unclear that no meaningful opinion could be formed (*specify*): *(omitted claim)*  
**see separate sheet**

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos. .

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)

Yes: Claims 2-10, 15, 17, 19-24

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/IB00/00841

|                               |      |        |                      |
|-------------------------------|------|--------|----------------------|
|                               | No:  | Claims | 1, 11-14, 16, 18, 25 |
| Inventive step (IS)           | Yes: | Claims |                      |
|                               | No:  | Claims | 1-26                 |
| Industrial applicability (IA) | Yes: | Claims | 1-26                 |
|                               | No:  | Claims |                      |

2. Citations and explanations  
**see separate sheet**

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:  
**see separate sheet**

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
**see separate sheet**

**Cited Documents**

The following documents are cited in the search report:

- D1: US-A-5 491 692 (GUNNER CHRISTOPHER W ET AL) 13 February 1996 (1996-02-13)
- D2: AMBROSOLI L, BURGER L, HUTERER M: 'TMN architecture for SDH networks using IS-IS routing protocol: design and performances' PROCEEDINGS OF INTERNATIONAL CONFERENCE ON COMMUNICATION TECHNOLOGY, vol. 1, 5 - 7 May 1996, pages 223-227, XP002159253 Beijing, China
- D3: EP-A-0 895 380 (PLESSEY TELECOMM) 3 February 1999 (1999-02-03)
- D4: KATZ H ET AL: 'SDH MANAGEMENT NETWORK: ARCHITECTURE, ROUTING AND ADDRESSING' PROCEEDINGS OF THE GLOBAL TELECOMMUNICATIONS CONFERENCE (GLOBECOM), US, NEW YORK, IEEE, vol. -, 29 November 1993 (1993-11-29), pages 223-228, XP000428058
- D5: ZHANG Y ET AL: 'AN APPROACH FOR CLUSTER-BASED MULTICAST ROUTING IN LARGE-SCALE NETWORKS' IEICE TRANSACTIONS ON COMMUNICATIONS, JP, INSTITUTE OF ELECTRONICS INFORMATION AND COMM. ENG. TOKYO, vol. E81- B, no. 5, 1 May 1998 (1998-05-01), pages 1029-1040, XP000779509 ISSN: 0916-8516

**Re Item III**

**Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

1. Claim 27 contains references to the drawings. According to Rule 6.2(a) PCT, claims should not contain such references except where absolutely necessary, which is not the case here. Moreover such claims are too unclear for a meaningful opinion to be provided (Article 6 PCT).

**Re Item V**

**Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. With respect to the independent claim 1, see D1, which discloses a communications arrangement forming part of a communications system (column 1, lines 3-4), the arrangement comprising one or more Local Area Networks (figure 1), one or more gateway network elements connected to each LAN (figure 1) and one or more further network elements (figure 1) which, together with the one or more gateway elements, form at least a part of a routing area (column 3, lines 4-11), the one or more gateway elements acting as an interface between the one or more further elements and the one or more LANs (column 3, lines 20-25, figure 1), wherein the one or more further elements are intermediate systems (column 1, lines 32-36), but the one or more gateway elements and the one or more further elements are configured such as to make the one or more further elements appear as end systems as far as the rest of the communications system is concerned (column 4, lines 30- 37).

Hence all features of claim 1 are known in combination from D1. Therefore the subject-matter of claim 1 lacks novelty (Articles 33 (1) and (2) PCT).

2. In case of novelty arguable based on minor differences, the subject-matter of claim 1 lacks an inventive step (Articles 33 (1) and (3) PCT).
3. The additional features of the following claims add no novel subject-matter to claim 1, being disclosed in D1:

- |           |   |
|-----------|---|
| Claim 11: | the routing information has been manually entered, see e.g. D1, column 4, lines 54-56   |
| Claim 12: | the packet is forwarded onto the other circuit on which the packet was received, see e.g. D1, column 2, lines 3-6   |
| Claim 13: | not discarding a message packet by a Level 1 intermediate system handling that packet if that intermediate system has access to an attached Level 2 intermediate system forming part of the area or part-area, see e.g. column 9, lines 15-30 |

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/IB00/00841

- Claim 14: see remark for claim 13
- Claim 16: the communication arrangement defined in this claim could also be derived from D1, figure 1
- Claim 18: the communications arrangement disclosed in this claim could e.g. be derivated from D1, figure 1
- Claim 25: see remark for claim 13

Therefore the subject-matter of claims 11-14, 16, 18 and 25 lacks novelty (Article 33(2) PCT).

4. The additional features of claims 2-10, 15, 17, 19-24 and 26 add nothing of invention significance (Article 33(3) PCT) to claim 1, being either obviously derivable from one of the prior art documents D1 - D5, or minor details obvious to a person skilled in the art based on common general knowledge:

- Claim 2-10: the subject-matter of the dependent claims 2-8 do not contain any feature which goes beyond the scope of IS/I.C. Recommendation 10589 and the ITU-T Recommendation G.784.
- Claim 15: one or more further elements comprise a peripheral domain, see e.g. D2, figure 2
- Claim 17: the communications arrangement disclosed in this claim could derivate e.g. from D2, figure 2
- Claim 19: discarding IS-IS Hello protocol data unit and Sequence number Protocol data unit packets received from a node of the second set, see e.g. D4, page 226, left-hand column
- Claim 20-24, 26: The additional features of claims 20-24 and 26 are disclosed in D2-D4.

**Re Item VII**

**Certain defects in the international application**

1. In order to comply with the requirements of Rule 6.3(b) PCT, the independent claim 1 should have been properly cast in the two-part form using the wording "characterized by" or "characterized in that", with those features forming part of the prior art being place in the preamble.

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

---

International application No. PCT/IB00/00841

2. The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).
3. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the document D1 is not mentioned in the description, nor is this document identified therein.
4. The phrase "it is possible to incorporate the principles embodied in the co-pending UK patent" on page 16, lines 19-20 should have been deleted as the application should be self-contained; such referenced documents are not regarded as part of the disclosure unless they contain matter essential to the invention, in which case the subject-matter in question would have to be incorporated into the description. This however is not the case here (see PCT Gazette-Section IV, C II-4.17).

**Re Item VIII**

**Certain observations on the international application**

1. It is clear from the description on pages 1-4 that the following feature is essential to the definition of the invention:

(1) the gateway network element is a level 1 / level 2 intermediate station

Since independent claim 1 does not contain this feature it does not meet the requirement following from Article 6 PCT taken in combination with Rule 6.3(b) PCT that any independent claim must contain all the technical features essential to the definition of the invention.

2. Claim 1 does not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined. The claim attempts to define the subject-matter in terms of the **result to be achieved** ("...are configured such as to make..., page 24, line 8) which merely amounts to a statement of the underlying problem. The technical features necessary for achieving this result should have been added.

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

|  |   |  |
|--|---|--|
| Applicant's or agent's file reference<br><b>P/61813/GPTX</b> | <b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below. |  |
| International application No.<br><b>PCT/IB 00/ 00841</b>     | International filing date (day/month/year)<br><b>08/06/2000</b>   | (Earliest) Priority Date (day/month/year)<br><b>08/06/1999</b> |
| Applicant<br><b>MARCONI COMMUNICATIONS SPA</b>               |   |  |

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

COMMUNICATION ARRANGEMENTS

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

3

☐ None of the figures.

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB 00/00841

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H04L12/56

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04L H04J H04Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, IBM-TDB, INSPEC

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No.                |
|------------|---|--------------------------------------|
| X          | <p>US 5 491 692 A (GUNNER CHRISTOPHER W ET AL) 13 February 1996 (1996-02-13)</p> <p>abstract<br/>column 1, line 32 - line 34<br/>column 3, paragraph 2 - paragraph 4<br/>column 4, line 17 - line 57<br/>column 8, paragraph 2 - paragraph 6<br/>figure 1</p> <p style="text-align: center;">---<br/>-/--</p> | <p>1,11-14,<br/>16-18,<br/>25,27</p> |

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*G\* document member of the same patent family

Date of the actual completion of the international search

2 February 2001

Date of mailing of the international search report

16/02/2001

Name and mailing address of the ISA

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NL - 2280 HV Rijswijk  
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Fax: (+31-70) 340-3016

Authorized officer

Blanco Cardona, P

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP 00/00841

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|------------|---|-----------------------|
| A          | <p>AMBROSOLI L, BURGER L, HUTERER M: "TMN architecture for SDH networks using IS-IS routing protocol: design and performances" PROCEEDINGS OF INTERNATIONAL CONFERENCE ON COMMUNICATION TECHNOLOGY, vol. 1, 5 - 7 May 1996, pages 223-227, XP002159253<br/>Beijing, China<br/>abstract<br/>page 223, left-hand column, paragraph 2<br/>-right-hand column, paragraph 2<br/>page 224<br/>page 227, left-hand column, paragraph 2<br/>---</p> | 2-15,<br>17-26        |
| A          | <p>EP 0 895 380 A (PLESSEY TELECOMM)<br/>3 February 1999 (1999-02-03)<br/>abstract<br/>the whole document<br/>---</p>   | 2-10,<br>17-26        |
| A          | <p>KATZ H ET AL: "SDH MANAGEMENT NETWORK: ARCHITECTURE, ROUTING AND ADDRESSING" PROCEEDINGS OF THE GLOBAL TELECOMMUNICATIONS CONFERENCE (GLOBECOM), US, NEW YORK, IEEE, vol. -, 29 November 1993 (1993-11-29), pages 223-228, XP000428058<br/>abstract<br/>page 225, left-hand column, paragraph 6<br/>-page 227, left-hand column, paragraph 6<br/>---</p>   | 2-15,<br>17-26        |
| A          | <p>ZHANG Y ET AL: "AN APPROACH FOR CLUSTER-BASED MULTICAST ROUTING IN LARGE-SCALE NETWORKS" IEICE TRANSACTIONS ON COMMUNICATIONS, JP, INSTITUTE OF ELECTRONICS INFORMATION AND COMM. ENG. TOKYO, vol. E81-B, no. 5, 1 May 1998 (1998-05-01), pages 1029-1040, XP000779509<br/>ISSN: 0916-8516<br/>abstract<br/>page 1029, right-hand column, paragraph 2<br/>page 1030, right-hand column, paragraph 4<br/>-----</p>                        | 1, 16                 |

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JP 00/00841

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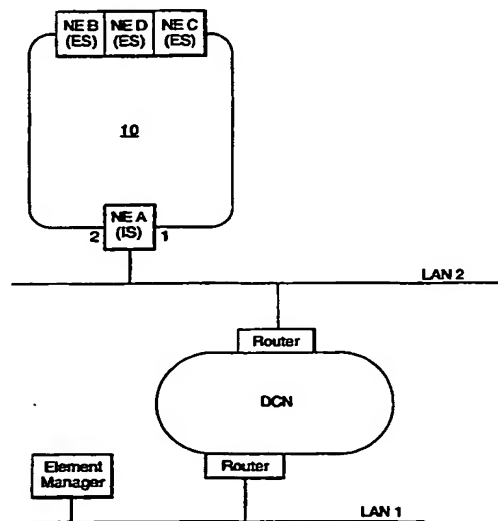
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(54) Title: **COMMUNICATIONS ARRANGEMENTS**



(57) Abstract: In a communications system, especially an SDH DCN system in which most network elements (NEs) function as intermediate systems (ISs) rather than end systems (ESs), it is made possible to reduce the constraints on the DCN topology posed by the IS-IS routing protocol by configuring the gateway element (GNE) and the NEs directly connected to it in such a way that the non-gateway NEs appear as ESs to the rest of the system. This is achieved by setting up on each of the digital communication channels (DCCs) of the GNE manual end-system adjacencies for all the NEs reachable through that DCC; setting the "external domain" attribute of these DCCs to TRUE and setting the same attributes of the corresponding DCCs of those NEs which are immediate neighbours of the GNE likewise TRUE; and supplying those DCCs with length-zero reachable address prefixes (RAPs) and configuring the neighbour NEs as level 2 Intermediate Systems. The invention applies especially to SDH ring topologies, in which case the gateway element has two DCCs, but also to bus topologies, in which case the gateway has only one DCC. Systems with more than one gateway element are also catered for.

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